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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte BIKASH AGARWALLA, SUJOY BASU, VANISH TALWAR,
and RAJENDRA KUMAR

Appeal 2009-007695
Application 10/666,093
Technology Center 2400

Before JOHN A. JEFFERY, THU A. DANG, and DEBRA K. STEPHENS,
Administrative Patent Judges.

JEFFERY, *Administrative Patent Judge.*

DECISION ON APPEAL¹

Appellants appeal under 35 U.S.C. § 134(a) from the Examiner's rejection of claims 1-27. We have jurisdiction under 35 U.S.C. § 6(b). We affirm.

¹ The two-month time period for filing an appeal or commencing a civil action, as recited in 37 C.F.R. § 1.304, or for filing a request for rehearing, as recited in 37 C.F.R. § 41.52, begins to run from the "MAIL DATE" (paper delivery mode) or the "NOTIFICATION DATE" (electronic delivery mode) shown on the PTOL-90A cover letter attached to this decision.

STATEMENT OF THE CASE

Appellants' invention pertains to grid computing, particularly securely accessing a remote desktop across firewalls. *See generally* Spec. 1, 4.

Claim 1 is illustrative:

1. An interactive grid computing system comprising:

an interactive grid computing service provider comprising:

a resource that said interactive grid computing service provider reserves for a client based on a request from said client for an interactive session for a service that said resource is enabled to provide;

a first firewall coupled to said resource for protecting said resource; and

a remote display server coupled to said first firewall for providing secure access to said resource over a secure connection and for providing interactive graphical data associated with said resource, wherein said client is enabled to communicate directly with said resource over said secure connection during said interactive session.

The Examiner relies on the following as evidence of unpatentability:

Butman	US 6,026,430	Feb. 15, 2000
Herse	US 7,127,745 B1	Oct. 24, 2006 (filed Mar. 24, 2000)

THE REJECTIONS

1. The Examiner rejected claims 1, 2, 4-6, 8-10, 12, 13, 15-21, and 23-27 under 35 U.S.C. § 102(b) as anticipated by Butman. Ans. 3-9.²
2. The Examiner rejected claims 3, 7, 11, 14, and 22 under 35 U.S.C. § 103(a) as unpatentable over Butman and Herse. Ans. 9-12.

THE ANTICIPATION REJECTION

Regarding representative claim 1, the Examiner finds that Butman discloses an interactive grid computing system comprising every recited feature including (1) a “remote display server” which the Examiner equates to Butman’s domain communications server A1, and (2) firewalls coupled to servers that store resources. Ans. 3-4, 12-14. According to the Examiner, Butman’s clients can communicate directly with resources either via the same network or server A1. Ans. 13-14.

Appellants argue that in Butman’s internal communications embodiment, each client-side communication server is behind a respective firewall, and therefore does not teach (1) a first firewall coupled to the resource for protecting the resource, and (2) a remote display server coupled to the first firewall to provide secure access to the resource as recited in claim 1, let alone protect the remote display viewer by a second firewall as recited in claim 12. App. Br. 9-11; Reply Br. 1-3.

Appellants add that since Butman’s client-side communication servers communicate directly with only with domain communications server A1 in

² Throughout this opinion, we refer to (1) the Appeal Brief filed April 21, 2008; (2) the Examiner’s Answer mailed July 14, 2008; and (3) the Reply Brief filed September 8, 2008.

the external communications embodiment, Butman does not teach that (1) the client communicates *directly* with the resource over a secure connection as recited in claim 1, and (2) the remote display viewer communicates *directly* with the remote display server as recited in claim 12. App. Br. 11; Reply Br. 3-4. The issues before us, then, are as follows.

ISSUES

Under § 102, has the Examiner erred by finding that Butman discloses:

(1)(a) a first firewall coupled to a resource for protecting the resource, and (b) a remote display server coupled to the first firewall to provide secure access to the resource, where the client communicates directly with the resource over a secure connection as recited in claim 1?

(2) protecting the remote display viewer by a second firewall, where the remote display viewer communicates directly with the remote display server as recited in claim 12?

FINDINGS OF FACT (FF)

1. Butman's system controls distribution, access security, filtering, organizing, and displaying information across disparate networks. To this end, domain communications server A1 communicates with multiple client-side communications servers C1-C9 that are each located behind a respective firewall F1-F9. Although each client-side communications server has only one actual communications "pipe"³ P with domain communications

³ A "pipe" is a temporary logical connection made between each client-side communications server and the domain communications server A1. Pipes

server A1, information may be disseminated from the client-side communications server C1 to any or all of the other client-side communications servers C2-C9. Butman, col. 1, ll. 6-11; col. 12, l. 25 – col. 13, l. 15; Fig. 1.

2. Butman's Figure 1a shows an exemplary implementation with four clients C1-C4 behind respective firewalls F1-F4 that are connected to domain communications server A1 via respective pipes. Client C2 (an investment bank) includes a wide area network C2WAN that, via pipe P2, interconnects associated client sites that each has its own local area network (C2-HKLan, C2-NYLan, C2-LNLan). Client C2 can therefore communicate logically with designated external sites as if they were internal sites, yet maintain the protections provided by its firewall F2, since client C2 does not physically connect with these external sites except domain communications server A1. Butman, col. 13, l. 44 – col. 14, l. 24; Fig. 1a.

3. Although client C2 seems to communicate with clients C1, C3, and C5 over pipe P2, client C2 actually has only one actual pipe connecting it to domain communications server A1. This single pipe can be a direct physical connection. Butman, col. 14, ll. 25-36; Fig. 1a.

4. Client C2 communicates externally with clients C1, C3, and C5 through domain communications server A1 over a set of “virtual pipes” VP2. This “virtual pipe” communication occurs as if the clients directly communicate with each other. But each client actually physically communicates with only the domain communications server, and only

can be formed over the Internet using conventional TCP-IP networking protocol and secure sockets with encryption. Butman, col. 12, ll. 34-39.

“virtually” communicates with the other clients. Butman, col. 14, ll. 36-45; Fig. 1a.

5. In a preferred embodiment, a client-side communications server CSS for a given customer must use a domain communications server to communicate with external customers. Butman, col. 16, ll. 3-6; Fig. 4.

6. Appellants refer to Figures 4 and 5 and Pages 17 through 19 of the present application in connection with the limitations of claim 1 reciting that the “client 210, 450 is enabled to communicate directly with said resource 444 over said secure connection 550 during said interactive session.” App. Br. 5 (Summary of Claimed Subject Matter).

7. Appellants note that in connection with claim 12, the present application describes that a Secure Socket Layer (SSL) connection 550 is established between the remote display viewer 512 and the remote display server, wherein the remote display viewer 512 is enabled to communicate directly with the remote display server 442. App. Br. 6 (Summary of Claimed Subject Matter).

8. Figure 5 of the present application is a data flow diagram for providing secure communication through firewalls in an interactive grid environment. System 500 provides a secure connection (e.g., SSL connection 550) between (1) a remote display server (e.g., the Virtual Network Computing (VNC) server 502 corresponding to the remote display server 442 of Figure 4), and (2) a remote display viewer (e.g., VNC viewer 512 corresponding to remote display resource 454 of Figure 4) of a user. Proxy servers 504, 508 (corresponding to firewalls 448, 458, respectively) and Internet 506 are located between the VNC viewer and server via SSL connection 550. Spec. 19:13-20:6; Fig. 5.

ANALYSIS

Claims 1, 2, 4-6, and 8-10

Based on the record before us, we find no error in the Examiner's anticipation rejection of representative claim 1 which calls for, in pertinent part, (1) a first firewall coupled to a resource for protecting the resource, and (2) a remote display server coupled to the first firewall to provide secure access to the resource, where the client communicates directly with the resource over a secure connection.

We agree with the Examiner (Ans. 14) that nothing in the claim precludes Butman's client-to-client communication via the domain communications server A1 as meeting the disputed limitations. Each client in Butman has a respective firewall that protects resources behind those firewalls which are, in turn, coupled to the domain communications server (i.e., the "remote display server"). FF 1-2.

Although Butman's clients directly *physically* connect with the domain communications server via "pipes" (FF 2-3, 5), nothing in claim 1 precludes the clients' *virtually* directly connecting to each other via "virtual pipes." *See* FF 4. Notably, this "virtual pipe" communication occurs as if the clients *directly* communicate with each other. *Id.* Therefore, despite the fact that Butman's clients communicate with each other via the domain communications server (FF 1-5), we nonetheless see no error in the Examiner's position (Ans. 14) that clients C1 and C3 (or any other clients in Butman) would directly *virtually* communicate with each other and their associated resources. Appellants' arguments to the contrary (App. Br. 9-11; Reply Br. 1-3) are simply not commensurate with the scope of the claim.

Lastly, notwithstanding Butman's virtual direct communication capabilities, we also note that Appellants' own disclosure contemplates intervening entities as part of a "direct" connection between the remote display server and viewer including, among other things, proxy servers and the Internet (which would likewise involve intervening entities such as servers). *See FF 7-8.* The Examiner's point in this regard (Ans. 14) is well taken.

We are therefore not persuaded that the Examiner erred in rejecting representative claim 1, and claims 2, 4-6, and 8-10 not separately argued.

Claims 12, 13, 15-21, and 23-27

We will also sustain the Examiner's rejection of representative claim 12 which calls for, in pertinent part, protecting the remote display viewer by a second firewall, where the remote display viewer communicates directly with the remote display server. As noted above in connection with claim 1, nothing in claim 12 precludes the direct virtual communication that occurs between clients and their associated resources, notwithstanding the involvement of the domain communications server to this end. *See FF 1-5.*

Nor are we persuaded of error in the Examiner's position (Ans. 5-6) that Butman's remote display server would provide graphical data to a remote display viewer protected by a second firewall as claimed. We reach this conclusion emphasizing that nothing in claim 12 precludes the multiple firewalls in Butman that would respectively protect the clients' resources and viewers when these clients directly communicate with each other virtually as noted previously. *See FF 1-4.*

We are therefore not persuaded that the Examiner erred in rejecting representative claim 12, and claims 13, 15-21, and 23-27 not separately argued.

THE OBVIOUSNESS REJECTION

We will also sustain the Examiner's obviousness rejection of claims 3, 7, 11, 14, and 22 over Butman and Herse (Ans. 9-12) essentially for the reasons indicated by the Examiner. Appellants basically reiterate their previous arguments regarding Butman's alleged shortcomings with respect to the independent claims, and that Herse does not cure these deficiencies. App. Br. 12-14; Reply Br. 4-5. We are not persuaded by these arguments, however, for the reasons previously discussed.

In the Reply Brief, Appellants argue for the first time that the references cannot be combined as the Examiner proposes since, among other things, (1) Herse teaches away from Butman, and (2) modifying Butman with Herse would allegedly change Butman's principle of operation and render Butman unsuitable for its intended purpose. Reply Br. 5-6. We deem these untimely arguments to be waived, and thus decline to address them here. *See Ex parte Borden*, 93 USPQ2d 1473, 1474 (BPAI 2010) (informative) ("[T]he reply brief [is not] an opportunity to make arguments that could have been made in the principal brief on appeal to rebut the Examiner's rejections, but were not.").

We are therefore not persuaded that the Examiner erred in rejecting claims 3, 7, 11, 14, and 22.

CONCLUSION

The Examiner did not err in rejecting (1) claims 1, 2, 4-6, 8-10, 12, 13, 15-21, and 23-27 under § 102, and (2) claims 3, 7, 11, 14, and 22 under § 103.

ORDER

The Examiner's decision rejecting claims 1-27 is affirmed.
No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a)(1)(iv).

AFFIRMED

llw

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